$$O_{pc} = (100\%)\left[1-\left(1-0.01\,O_p\right)^{\mathrm{Cos}\beta}p\right], \qquad (AM1\text{-}14)$$

Where:

β_p=lidar elevation or inclination angle,
O_p=measured opacity along path L, and
O_{pc}=corrected opacity for the actual plume thickness P.

The values for β_p, O_p and O_{pc} should be recorded.

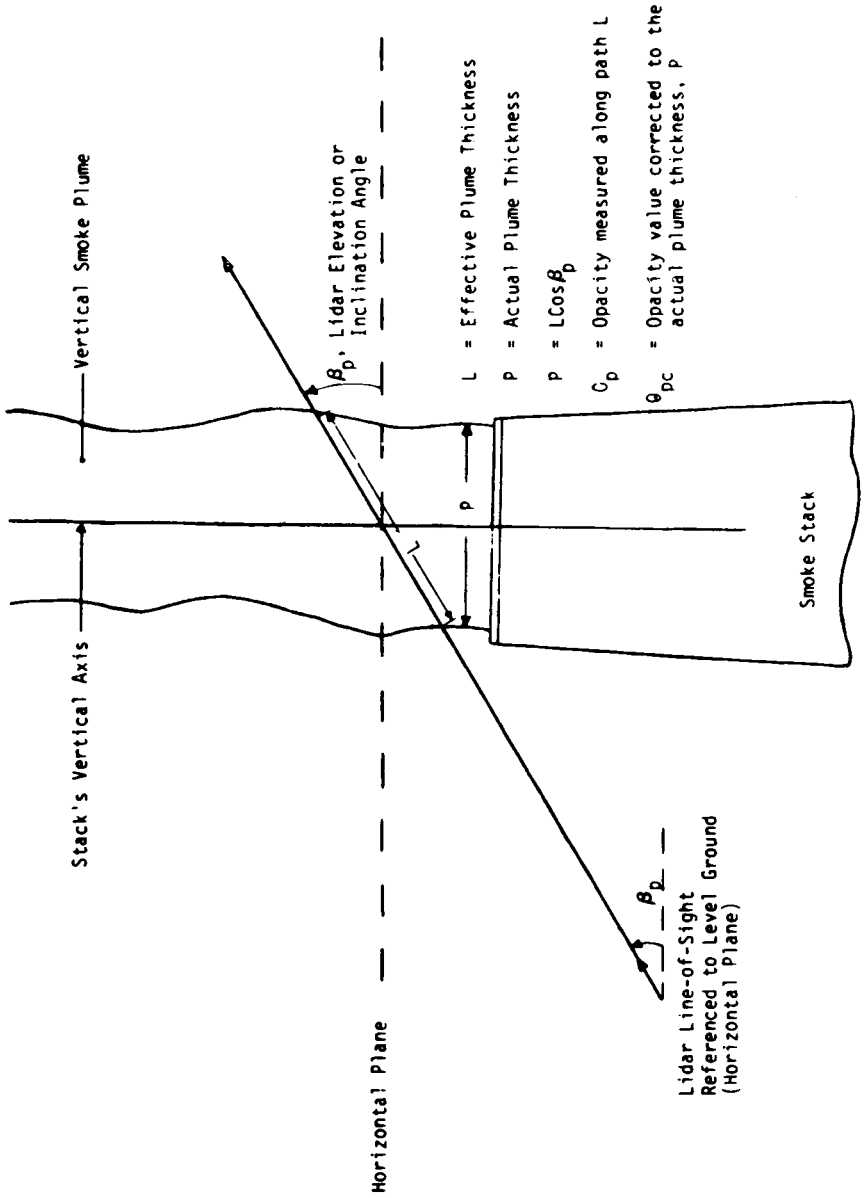

Figure AM1-V. Elevation Angle Correction for Vertical Plumes.

2.6.3 Determination of Actual Plume Opacity. Actual opacity of the plume shall be determined by Equation AM1–15.

$$O_{pa} = O_{pc} - [2\ S_o + 5\%]. \quad \text{(AM1-15)}$$

2.6.4 Calculation of Average Actual Plume Opacity. The average of the actual plume opacity, O_{pa}, shall be calculated as the average of the consecutive individual actual opacity values, O_{pa}, by Equation AM1–16.